

### REMARKS/ARGUMENTS

Claims 20, 21, 23-46 and 54 are pending herein. Claim 54 has been amended to recite the ratio of limit discharging current to cell capacity to be at least around 30, as originally presented in the Amendment filed August 20, 2004. The specification has been amended to recite inherent characteristics of the batteries that were expressly described in the original application. For the reasons explained below, this Amendment does not introduce new matter into the application.

Examiner Yuan is thanked for courtesies extended to Applicants' undersigned representative during the telephonic interview on April 12, 2005. During that interview, it was explained that the ratio of limit discharging current to cell capacity of "at least around 31.25", as recited in claim 54 in the Amendment filed January 11, 2005, is supported by paragraph [0131] and Table 1 of the original application. Specifically, it was explained that the examples in the specification disclose batteries having a capacity of about 8 Ah and a limiting discharge current of 250 A. Thus, the ratio of limiting discharging current to cell capacity is about 31.25 ( $250 \div 8 = 31.25$ ).

Examiner Yuan understood this support in the specification, but argued that claim 54 recites a battery having a capacity of 2 Ah, and as such, in his opinion, the specification examples relating to 8 Ah batteries did not support a ratio of 31.25 with respect to 2 Ah batteries.

In response to this argument, Applicants' representative explained that one of ordinary skill in the art would understand that the relationship between battery capacity and limit discharging current is essentially linear. As such, an 8 Ah battery would be expected to exhibit a limit discharging current that is about four times higher than that exhibited by a 2 Ah battery. That is, a reduction in battery capacity from 8 Ah to 2 Ah would cause a reduction in limit discharging current by a factor of 4. Examiner Yuan argued that there was no support in the record for this assertion.

Attached hereto is the Rule 132 Declaration of Toshihiro Yoshida. Mr. Yoshida repeated Embodiment 9 from the present specification, which is an 8 Ah battery. Mr. Yoshida reduced the size of the positive and negative electrodes by a factor of 4, which caused the resulting battery to exhibit a capacity of about 2 Ah (i.e.,  $\frac{1}{4}$  of the capacity of the 8 Ah battery as described in Embodiment 9).

Mr. Yoshida's Declaration explains that, when the 2 Ah battery was tested, it exhibited a limit discharging current of about 60 A. This is also about  $\frac{1}{4}$  of the limit discharging current exhibited by the 8 Ah battery in Embodiment 9. Again, this is to be expected, since the relationship between battery capacity and limit discharging current is essentially linear.

As described above, the specification has been amended to incorporate this experimental data. Since this data is an inherent characteristic of the batteries already described in the present specification, its introduction into the specification does not introduce new matter. See MPEP §2163.07(a) and *Kennecott Corp v. Kyocera International Inc.* (copies attached).

In light of all of the foregoing, it is clear that the specification inherently supports a 2 Ah capacity battery having a ratio of limit discharging current to cell capacity of at least around 30. Claim 54 has been amended to recite this feature. Support for the amendment to claim 54 is inherently provided by the original specification, and is now expressly supported by the specification after entry of the specification amendment outlined above.

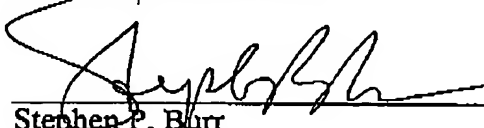
For the reasons explained above, Applicants respectfully submit that all pending claims herein are in condition for allowance. Accordingly, Examiner Yuan is requested to issue a Notice of Allowance for this application in due course. Examiner Yuan is requested to telephone Applicants' undersigned representative if an additional telephonic interview would be helpful.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,

July 1, 2005

Date

  
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Attachments: Rule 132 Declaration of Toshihiro Yoshida  
MPEP §2163.07(a)  
*Kennecott Corp v. Kyocera International Inc.*

2163.07(a)

## MANUAL OF PATENT EXAMINING PROCEDURE

**2163.07(a) Inherent Function, Theory, or Advantage**

By disclosing in a patent application a device that inherently performs a function or has a property, operates according to a theory or has an advantage, a patent application necessarily discloses that function, theory or advantage, even though it says nothing explicit concerning it. The application may later be amended to recite the function, theory or advantage without introducing prohibited new matter. *In re Reynolds*, 443 F.2d 384, 170 USPQ 94 (CCPA 1971); *In re Smythe*, 480 F.2d 1376, 178 USPQ 279 (CCPA 1973). "To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted).

**2163.07(b) Incorporation by Reference [R-1]**

Instead of repeating some information contained in another document, an application may attempt to incorporate the content of another document or part thereof by reference to the document in the text of the specification. The information incorporated is as much a part of the application as filed as if the text was repeated in the application, and should be treated as part of the text of the application as filed. Replacing the identified material incorporated by reference with the actual text is not new matter. See MPEP § 608.01(p) for Office policy regarding incorporation by reference. >See MPEP § 2181 for the impact of incorporation by reference on the determination of whether applicant has complied with the requirements of 35 U.S.C. 112, second paragraph when 35 U.S.C. 112, sixth paragraph is invoked.<

**2164 The Enablement Requirement [R-2]**

The enablement requirement refers to the requirement of 35 U.S.C. 112, first paragraph that the speci-

fication describe how to make and how to use the invention. The invention that one skilled in the art must be enabled to make and use is that defined by the claim(s) of the particular application or patent.

The purpose of the requirement that the specification describe the invention in such terms that one skilled in the art can make and use the claimed invention is to ensure that the invention is communicated to the interested public in a meaningful way. The information contained in the disclosure of an application must be sufficient to inform those skilled in the relevant art how to both make and use the claimed invention. >However, to comply with 35 U.S.C. 112, first paragraph, it is not necessary to "enable one of ordinary skill in the art to make and use a perfected, commercially viable embodiment absent a claim limitation to that effect." *CFMT, Inc. v. Yieldup Int'l Corp.*, 349 F.3d 1333, 1338, 68 USPQ2d 1940, 1944 (Fed. Cir. 2003) (an invention directed to a general system to improve the cleaning process for semiconductor wafers was enabled by a disclosure showing improvements in the overall system).< Detailed procedures for making and using the invention may not be necessary if the description of the invention itself is sufficient to permit those skilled in the art to make and use the invention. A patent claim is invalid if it is not supported by an enabling disclosure.

The enablement requirement of 35 U.S.C. 112, first paragraph, is separate and distinct from the description requirement. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116-17 (Fed. Cir. 1991) ("the purpose of the 'written description' requirement is broader than to merely explain how to 'make and use' "). See also MPEP § 2161. Therefore, the fact that an additional limitation to a claim may lack descriptive support in the disclosure as originally filed does not necessarily mean that the limitation is also not enabled. In other words, the statement of a new limitation in and of itself may enable one skilled in the art to make and use the claim containing that limitation even though that limitation may not be described in the original disclosure. Consequently, such limitations must be analyzed for both enablement and description using their separate and distinct criteria.

Furthermore, when the subject matter is not in the specification portion of the application as filed but is

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**Kennecott Corp. v. Kyocera International Inc.**

**U.S. Court of Appeals Federal Circuit  
5 USPQ2d 1194**

**Decided December 22, 1987  
No. 87-1151**

**Headnotes**

**PATENTS**

**1. Practice and procedure in Patent and Trademark Office -- Prosecution -- Filing date  
(§ 110.0906)**

**Patentability/Validity -- In general (§ 115.01)**

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## Full Text of Cases (USPQ2d)

**Patentability/Validity – Adequacy of disclosure (§ 115.11)**

Grant of summary judgment to patent infringement defendant on grounds that patent holder's ceramic product patent was invalid under patentability bar of being "on sale" prior to application date under 35 USC 102(b), is error since earlier application for parent patent inherently described property of equiaxed microstructured ceramic product by its disclosure, and, despite not specifically naming such ceramic product, complies with 35 USC 120 and 112 for purposes of claiming benefit of earlier prior-to-sale application filing date of parent patent, and thus plaintiff's ceramic product patent is valid.

**Particular patents – Chemical – Ceramic body**

4,179,299, Coppola, Hailey and McMurtry, sintered alpha silicon carbide ceramic body having equiaxed microstructure, a crystal structure whose submicron grain sizes of silicon carbide are not highly elongated, do not have exaggerated grain growth, and are within a maximum-minimum dimension ratio of less than 3:1, holding of invalidity reversed.

**Case History and Disposition:**

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Appeal from the U.S. District Court for the Southern District of California, Rhoades, J. 2 USPQ2d 1455 .

Plaintiff, Kennecott Corp., brought patent action against Kyocera International Inc. and Kyoto Ceramic Co. Ltd. From grant of summary judgment to defendant holding plaintiff's patent invalid, plaintiff appeals. Reversed.

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**Attorneys:**

Clyde F. Willian (William Brinks Olds Hofer Gilson & Lione, Jack C. Berenzweig, and Raymond W. Green, with him on brief), Chicago Ill., for plaintiff-appellant Kennecott Corp.

Paul L. Gardner (Spensley Horn Jubas & Lubitz, Stuart Lubitz, Saul Epstein, and David L. Henty, with him on brief), Los Angeles, Calif., for defendants-appellees Kyocera International Inc. and Kyoto Ceramic Co. Ltd.

**Judge:**

Before Markey, Chief Judge, and Davis and Newman, Circuit Judges.

**Opinion Text****Opinion By:**

Newman, Circuit Judge.

Kennecott Corporation appeals the final judgment of the United States District Court for the Southern District of California, 1 in which the district court granted summary judgment to the defendants Kyocera International and Kyoto Ceramic Co., Ltd. (together "Kyocera"), holding that United States Patent No. 179, 299 ("the '299 patent") is invalid in terms of the "on sale" bar of 35 U.S.C. §102(b). Kennecott's claim of patent infringement was dismissed. We reverse.

***The Controlling Question***

The judgment of invalidity turned on the sole question of whether the claims of the '299 patent are entitled, as a matter of law, to the benefit of the filing date of its parent patent application which eventually issued as U.S. Patent No. 4,312,954 ("the '954 application"), filed on June 5, 1975. If so entitled, the sales events in 1977 can not effect an invalidity bar. If not so entitled, Kennecott admits that its sales activities occurred more than one year before May 1, 1978, the filing date of the continuation-in-part application that issued as the '299 patent.

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**Background**

On summary judgment all facts material to the result must be either undisputed or, if disputed, must be resolved in favor of the party opposing summary judgment. *Litton Industrial Products, Inc. v. Solid State Systems Corp.*, 755 F.2d 158, 163, 225 USPQ 34, 37 (Fed. Cir. 1985). Rule 56, Fed. R. Civ. Proc. The question of the sufficiency of the disclosure of the '954 application to support the '299 claims is a matter of law based on underlying facts. All facts material to the issue are here deemed undisputed, based on admissions by Kyocera for the purpose of its motion for summary judgment.

Kyocera states in its brief on appeal that it did not concede or admit all the facts that Kennecott says it did. The district court found, however, that:

Finding 11. For the purposes of this Motion only, the material facts set forth in all of the affidavits and in all of the exhibits submitted by plaintiff in opposition to Defendants' Motion, are undisputed by defendants.

Kyocera has not assigned error to this finding, and it is bound thereby.

The continuation-in-part '299 application contains a substantial part of the disclosure of the '954 parent application, plus a description of and photomicrographs showing the

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equiaxed microstructure. 2 It is not disputed that the photomicrographs were of the product made and described in the '954 application, and produced in the original examples.

The '299 patent claims contain the words "equiaxed microstructure" that were not present in the '954 specification and claims. This is the only difference at issue. '299 patent claim 1 is representative:

1. A sintered ceramic body consisting essentially of:

(a) from about 91 to about 99.85% by weight silicon carbide, wherein at least 95% by weight of the silicon carbide is of the alpha phase;

(b) up to about 5.0% by weight carbonized organic material;

(c) from about 0.15 to about 3.0% by weight boron; and

(d) up to about 1.0% by weight additional carbon;

and having a predominantly equiaxed microstructure.

Pertinent undisputed or conceded facts include the following:



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the high (over 95%) alpha silicon carbide ceramic body that is described in the '954 application has an equiaxed microstructure;

✓ the '954 application does not mention the equiaxed microstructure of the high-alpha silicon carbide ceramic body, nor state the requirements for forming such microstructure;  
the inventors knew that the high-alpha silicon carbide ceramic body had an equiaxed microstructure, and it was known that ceramics from high-alpha silicon carbide could have this structure;

✓ examples 1-30 in the '954 application, all the examples using high-alpha silicon carbide, all produce a ceramic body having an equiaxed microstructure;

the method set forth in the '954 application using the high-alpha silicon carbide invariably produces a ceramic product having an equiaxed microstructure.

✓ Kennecott asserts that the equiaxed microstructure is inherent in the structure produced in the '954 application, and that the '299 claims, which specifically name the equiaxed structure,  
therefore enjoy the benefit of the earlier filing date. Kennecott also asserts, and Kyocera denies, that Kyocera conceded the question of inherency in the course of conceding all disputed facts on its motion for summary judgment.

It is apparent that Kyocera conceded the factual premises 3 of inherency by conceding that examples 1-30 produced, without undue experimentation, a product having an equiaxed microstructure. What is disputed is the legal implication of this inherent production of an equiaxed product.

The district court concluded that for the '954 specification to meet the written description requirement, one reading the specification must know from the "four corners" of the document, without recourse to information outside the specification, that the ceramic product has an equiaxed microstructure. The district court held that the specification of the '954 application met the enablement requirement of section 112 but not the written description requirement, and thus that it was immaterial that the product disclosed in the '954 application was the same as that claimed in the '299 patent.

### Discussion

For the '299 claims to receive the benefit of the '954 application's filing date, 35 U.S.C. § 120 requires, inter alia, that the invention of the claims be disclosed in the '954 specification in the manner required by 35 U.S.C. § 112, first paragraph, which provides:

§ 112 ¶1: The specification shall contain a written description of the invention, and of the manner

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and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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The purpose of section 112, first paragraph, is to ensure that there is an adequate disclosure of the invention for which patent rights are sought. The purpose of the description requirement of this paragraph is to state what is needed to fulfill the enablement criteria. These requirements may be viewed separately, but they are intertwined.

The incorporation of the requirements of section 112 into section 120 ensures that the inventor had possession of the later-claimed invention on the filing date of the earlier application. *In re Edwards*, 568 F.2d 1349, 1351, 196 USPQ 465, 467 (CCPA 1978). The written description must communicate that which is needed to enable the skilled artisan to make and use the claimed invention. A description that does not meet this requirement is legally insufficient. *In re Wilder*, 736 F.2d 1516, 1520, 222 USPQ 369, 372 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 1209 (1985).

It was undisputed that the only written description in the '299 application that was not present in the original '954 disclosure was the description and pictures of the product's microstructure. Kennecott points to authority that the added description of a property of a previously disclosed product does not deprive claims to that product of the benefit of a prior disclosure of the product. Kyocera responds that because the '954 specification is silent as to the microstructure of the product, and because one would not know whether the product had an equiaxed microstructure merely by reading the specification, the specification is inadequate in law to support claims that require an equiaxed microstructure. Kyocera also asserts that the equiaxed microstructure is not obtained without physical manipulation of the process of the '954 application, and that any concession it may have made as to production of an equiaxed product is limited to the specific conditions used in examples 1-30 of the '954 specification.

Taking the last contention first, it was admitted that the products of examples 1-30 have the equiaxed microstructure, and that one skilled in this art could readily determine the

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microstructure of the product. Kyocera's arguments on appeal as to the need for manipulation of conditions are contravened in the affidavit evidence referred to in Finding of Fact 11, *supra*. We conclude that it was established before the district court that the high-alpha products of the '954 application have the equiaxed microstructure.

On the issue of sufficiency of the earlier disclosure, the body of precedent teaches that the legal conclusion depends on the particular facts. In *In re Edwards* the court considered a chemical compound that was not described in the earlier application, and stated that the earlier and later applications need not use the identical words, if the earlier application shows the subject matter that is claimed in the later application, with adequate direction as to how to obtain it. The court observed that the chemical reactions described in the earlier filing "will inherently produce, as the predominant component, the [later claimed] compound". 568 F.2d at 1352; 196 USPQ at 467. The facts in *Edwards* are strongly analogous to those herein, for Kennecott's '954 examples 1-30 all produce a ceramic that has an equiaxed structure.

The facts before us are not like those discussed in *In re Ruschig*, 379 F.2d 990, 154 USPQ 118 (CCPA 1967), referred to by the district court, but are analogous to those discussed in *In re Reynolds*, 443 F.2d 384, 170 USPQ 94 (CCPA 1971). In *Reynolds* the question was whether words describing a function that was inherent in the claimed product could be added to the specification by amendment, or whether such description was "new matter". The court cited with approval the holding in *Technicon Instruments Corp. v. Coleman Instrument, Inc.*, 225 F.Supp. 630, 640-41, 150 USPQ 227, 236 (N.D. Ill. 1966), *aff'd*, 385 F.2d 391, 155 USPQ 369 (7th Cir. 1967), that:

By disclosing in a patent application a device that inherently performs a function, operates according to a theory, or has an advantage, a patent applicant necessarily discloses that function, theory, or advantage even though he says nothing concerning it.

✓ { Quoted at 433 F.2d at 389, 170 USPQ at 98. It was concluded that the express description of the inherent property, since not "new matter", could be added to the specification with effect as of the original filing date.

The Court of Customs and Patent Appeals has long recognized that an invention may be described in different ways and still be the same invention. In *In re Kirchner*, 305 F.2d 897, 904, 134 USPQ 324, 330 (CCPA 1962), the court held that compliance with section 120 does not require that the invention be described in the same way, or comply with section 112 in the same way, in both applications.

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*Id.* In *Kirchner* the court authorized the addition to the specification of descriptive matter concerning the use of the compounds without loss of the parent application's filing date. In the '299 patent, by contrast, the additional material was added not only to the specification, but to the claims. Thus *Kyo*

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*cera* argues that it is immaterial that the product in the '299 claims is inherently the same as that produced in the '954 application, because unlike *Kirchner* the '299 claims include the new descriptive matter.

The Court of Customs and Patent Appeals did not adopt the position that is now urged by *Kyocera*. In *In re Nathan*, 328 F.2d 1005, 1008-09, 140 USPQ 601, 604 (CCPA 1964), the court held that the later-added limitation to the claims of the compound's alpha orientation was "an inherent characteristic" of the claimed subject matter, and reversed a new matter rejection. The *Nathan* court explained that "a subsequent clarification of or a change in an original disclosure does not necessarily make that original disclosure fatally defective." *Id.* at 1008, 140 USPQ at 603.

*Kennecott* argues that *Kyocera* is pressing the position rejected in *Kirchner*, wherein the court cautioned that it is necessary to avoid confusing "the invention itself which is the subject matter claimed . . . with one of the factors which is taken into consideration in determining whether the invention is or is not patentable from the standpoint of meeting 35 U.S.C. 103." *Id.* at 903-04, 134 USPQ at 329-30. The *Kirchner* court held that it was not required "that a parent case disclose the same utility as a later application to entitle the latter to the benefit of the filing date of the parent." *Id.* at 904, 134 USPQ at 330. In the case at bar the additional description was not of a new use, but of the existing physical structure of the product. On the basis of this precedent, the inclusion of the existing microstructure as a descriptive term in the '299 claims does not cause the '299 claims to lose their entitlement to the date of the first-filed '954 application.

The district court relied on *Langer v. Kaufman*, 465 F.2d 915, 918, 175 USPQ 172, 174 (CCPA 1972). In *Langer* the diffraction pattern specifically recited in an interference count was not expressly described in the specification. The court held, "To prove inherency, the burden is on appellants to show that the 'necessary and only reasonable construction to be given the disclosure

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by one skilled in the art is one which will lend clear support to . . . [this] positive limitation in the interference count.' " *Id.* (emphasis omitted) (quoting *Binstead v. Littmann*, 242 F.2d 766, 770, 113 USPQ 279, 282 (CCPA 1957)). The issue in *Langer* was entitlement to the benefit of constructive reduction to practice, which the court denied despite evidence that one of the experiments, Run E, produced the claimed diffraction pattern. The court has generally applied this standard of the "necessary and only reasonable construction" as a basis for determining whether an application could, on the basis of an inherent property, support a limitation in an interference count. See, e.g., *Wagoner v. Barger*, 463 F.2d 1377, 1380, 175 USPQ 85, 86-87 (CCPA 1972); *Snitzer v. Etzel*, 531 F.2d 1062, 1076, 189 USPQ 415, 419 (CCPA 1976). This standard, arising in the interference context, is consistent with that of the other cases on the issue of compliance with section 112, first paragraph.

[1] In this case, the invention of the '299 claims is a ceramic product. That product is the same as the product in the '954 application, and has the same structure. It was conceded that anyone with a microscope would see the microstructure of the product of the '954 application. The disclosure in a subsequent patent application of an inherent property of a product does not deprive that product of the benefit of an earlier filing date. Nor does the inclusion of a description of that property in later-filed claims change this reasonable result.

We conclude that the district court erred in holding that the '299 claims were not entitled to the '954 filing date.

**REVERSED**

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Footnotes

Footnote 1. *Kennecott Corporation v. Kyocera International, Inc. and Kyoto Ceramic Co., Ltd.*, No. 80-0516 R(M) (S.D. Calif. Dec. 17, 1986).

Footnote 2. "Equiaxed microstructure" is the crystal structure of the silicon carbide in submicron size grains that are not highly elongated and that do not have exaggerated grain growth. As

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defined in the '299 patent the ratio of the maximum dimension of the grains to the minimum dimension is less than 3:1.

Footnote 3. Kyocera raises on this appeal factual issues that appear to contradict its concessions before the district court, including issues related to Kennecott's representations to the patent examiner in prosecuting the '299 application. However, it is too late in the proceeding for Kyocera to retreat from its blanket concession of the factual issues.

**- End of Case -**

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